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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,866	06/23/2003	**Anand G. Dabak**	TI-28441A	7204

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EXAMINER	
CORRIELUS, JEAN B	

ART UNIT	PAPER NUMBER
2611	

NOTIFICATION DATE	DELIVERY MODE
03/24/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@ti.com
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Office Action Summary	Application No.	Applicant(s)	
	10/601,866	DABAK ET AL.	
	Examiner	Art Unit	
	Jean B. Corrielus	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 August 2006 and 24 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *26,28-36 and 38-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *26, 28-36, 38-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Page 5, line 14, "S_{12}" should be replaced by "S_2". In addition, Equation 6, "S_{12}" should be replaced by "S_2" so as to be consistent with fig. 2.

Claim Objections

2. Applicant's response has overcome the objection of claims 26-45. However, claims 26, 30-36, 38-45 are further objected to for the following reasons.

3. Claim 26, recites a correction circuit coupled to receive a first symbol transmitted from a first antenna at one time and a complement of a conjugate of a second symbol transmitted from a second antenna at the one time and coupled to receive the second symbol transmitted from the first antenna at another time and a conjugate of the first symbol transmitted from the second antenna at the another time". However, the **complement of the conjugate of the second symbol** and **the conjugate of the first symbol** have been received but not used by the correction circuit. Such deficiencies can be corrected by amended claim 26, as follow: insert "and a second symbol estimate in response to the second symbol and the complement of the conjugate of the second symbol" in line 7, after "first symbol"; insert "and the second" after "first" in line 8; replace "estimate" by estimates" in line 9 and; insert "and a second symbol signal" in line 10 after "signal". Such amendment would be consistent with fig. 3 and corresponding text that require that two signals be generated at the output of the correction circuit using the

plurality of input signals. The same comment applies to claim 36. Claim 28 should be amended to reflect any change made to claim 26. As per claim 38 see claim 28. Claims 43-44 would need to be amended to reflect any change made to claim 36. The further limitation recited in claim 45 appears to be directed to an apparatus claim rather than a method claim. Any claim that fails to correct the deficiencies noted in its corresponding base claim is likewise objected to.

4. Applicant's response has overcome the 112 second paragraph rejection.

Double Patenting

5. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

6. Claims 26, 28-33, 36, 38-42, provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 34, 36-42, 44-48, 50, 52-58, 60-64 of copending Application No. 10/659,906. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent

and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 34-35 and 43-45 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 34, 41 and 50, of copending Application No. 10/659,906. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 34 of the instant application is substantially encompassed by claim 34/50 of the copending application except that claim 34/50 of the copending application does not recite the first and second antennas are transmitting antennas. However, one skill in the art would have been motivated to configure the antennas as transmitting antennas in order to facilitate transmission of the symbol signal to desired remote receiver.

As per claim 35, claim 34/50 of the copending application teaches every feature of the claimed invention but does not teach "the correction circuit is coupled to an antenna that receives said first symbol transmitted from said first antenna and said complement of said conjugate of said second symbol transmitted from said second antenna". However, it would have been obvious to one skill in the art to provide a received antenna to receive the signals transmitted from the transmitter so as to satisfy the input

requirement of the wireless receiver that would require an antenna in order to receive the transmitted signal.

As per claim 43 of the instant application differs from claim 34/50 of the copending application only by the fact that claim 43 of the instant application is a method claim and claim 34/50 of the copending application is an apparatus claim. However, it would have been obvious to one skill in the art to implement the method claim as recited in claim 43 using the apparatus claim as set forth in the copending application as this would only require common sense.

As per claim 44 of the instant application is encompassed as well by claim 34/50 of the copending application. The same analysis applied to claim 43 above equally applies to claim 44.

As per claim 45 of the instant application is encompassed as well by claim 41 of the copending application. The same analysis applied to claim 43 above equally applies to claim 45.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Applicant's arguments, see page 8, filed 8/22/06 with respect to the103 rejection have been fully considered and are persuasive. The 103 rejection of claims 26-45 has been withdrawn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Monday-Thursday from 9:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jean B Corrielus/
Primary Examiner, Art Unit 2611